



## **Valuation Methodologies**

An overview of the four most commonly used business valuation methodologies

A complete business valuation often provides an objective starting point for both buyers and sellers of businesses. Without a professional valuation, the seller may be ill prepared to meet with buyers, especially if the buyers have a more accurate idea of the value of the business. In short, without a comprehensive business valuation you may be leaving money on the table, and not even know it!

Strictly speaking, a company's fair market value is the price at which the business would change hands between a willing buyer and a willing seller when neither are under any compulsion to buy or sell, and both parties have knowledge of relevant facts. This is a somewhat circuitous statement because it begs the question, "How do buyers and sellers arrive at this value?"

Arriving at the transaction price requires that a value be placed on the company for sale. The process of arriving at this value should include a detailed, comprehensive analysis which takes into account a range of factors including the past, present, and most importantly, the future earnings and prospects of the company.

Valuing a business is not an exact science. The valuation process involves comparing several different approaches and selecting the best method, or a combination of methods, based on the analyst's knowledge and experience. Generally, there are several different methodologies that practitioners use to value businesses. These are:

1. Asset-based valuation;
2. Comparable transactions analysis;
3. Comparable public company method; and
4. Discounted cash flow.

In applying these methodologies to determine the value of a business, one or more of the following factors are generally reviewed and analyzed:

1. The nature of the business and its operating history;
2. The industry and economic outlook;
3. The book value and financial condition of the company;
4. The company's earnings and dividend paying capacity;
5. The value of the company's intangible assets;
6. Market prices of public companies engaged in similar lines of business; and
7. Transaction prices of other companies engaged in similar lines of business.

Throughout the valuation process, it is important that the purpose of the valuation be kept in mind. Although a valuation can serve many purposes, if the aim is to sell the business, then

the valuation should objectively determine the fair market value of the business. This objective market valuation should also take into account the synergies and fit that the business may have with potential buyers. In addition to valuing a business for an impending sale, a business valuation can also be required for legal proceedings, estate planning, shareholder disputes and for capital raising.

Although commonly used "rules of thumb" may be a good starting point to obtain a rough idea of the valuation of a business, a comprehensive business valuation is ultimately what is required. Rules of thumb often provide a useful "back of the envelope" test of value that is based on empirically available data. This empirically available data includes industry benchmarks or historical transaction multiples. Although a rule of thumb can give a quick answer to a difficult question, they do not take into account business-specific information that may significantly impact the value of a business above and beyond industry benchmarks. In fact, the IRS weighs in on this very issue, and states in everyone's favorite IRS Revenue Ruling 59-60 - that, "a determination of fair market value, being a question of fact, will depend upon the circumstances in each case." The Rule continues, "No formula can be devised that will be generally applicable to the multitude of different valuation issues."

### **Asset Based Valuation**

This valuation method is based on the premise that the value of a business can best be determined by adding the value of all the assets of the company and subtracting the liabilities, leaving a net asset valuation. An asset-based valuation can be further segmented into four approaches: (1) book value, (2) replacement cost, (3) appraised value, and (4) excess earnings. Asset-based valuation methods ignore the importance of a company's earnings and cash flow. For this reason, this valuation approach is generally not used to determine the market value of a company - especially in the context of an acquisition.

**Book Value** - The book value of a company is obtained from the balance sheet by taking the adjusted historical cost of the company's assets and subtracting the liabilities. Tangible book value is calculated the same way as finding regular book value, except that intangible assets (like goodwill) are excluded in the calculation. Using book value does not provide a true indication of a company's value, nor does it take into account the cash flow that can be generated by the company's assets.

**Replacement Cost** - Replacement cost reflects the expenditures required to replicate the operations of the company. Figuring replacement cost is essentially a make or buy decision.

**Appraised Value of Assets** - The difference between the appraised value of assets and the appraised value of liabilities is the net appraised value of the firm. This approach may be most commonly used in a liquidation analysis because it reflects the divestiture of the underlying assets rather than the ongoing operations of the firm.

**Excess Earnings** - In order to obtain a value of the business using the excess earnings method, a premium is added to the appraised value of net assets. This premium is calculated by comparing the earnings of a business before a sale and the earnings after the sale, with the

difference referred to as excess earnings. Assuming that the business is run more efficiently after a sale, the total amount of excess earnings is capitalized (e.g., the difference in earnings is divided by some expected rate of return) and this result is then added to the appraised value of net assets to derive the value of the business.

### **Comparable Transactions Analysis**

Comparable transactions analysis involves obtaining financial and operating data from other, similar transactions and applying it to the target company to obtain a predicted value. These historical transactions involve companies that have similar lines of business as the company being valued. In analyzing comparable transactions, valuation professionals will often divide deal price by some industry standard metric, such as EBITDA, or number of subscribers. An average or the median of the resulting multiples is then multiplied by the target company's metrics to obtain a company valuation.

Depending upon the relative similarity or difference of the target company's characteristics to the group of comparable transactions, analysts may apply a discount or premium to the multiple before it is multiplied by the target company's metrics.

Although comparable transactions analysis can be an important valuation methodology, its usefulness is dependent on the relevance, quality and timeliness of historical transactions data. In addition, due to the fact that the overwhelming majority of acquisitions involve privately-held companies, there is often a dearth of financial data available to track the financial characteristics of these transactions.

### **Comparable Public Company Method**

Public markets are generally considered efficient at valuing companies. Each day, stock prices reflect the instantaneous and independent pricing decisions of buyers and sellers around the world. Thus, using existing public companies as a benchmark to value similar private companies is a viable valuation methodology.

The comparable public company method involves selecting a group of publicly traded companies that, on average, are representative of the company that is to be valued. What is important is that investors would view the comparable companies and the target company as similar. Each comparable company's financial or operating data (like revenues, EBITDA or book value) is compared to each company's total market capitalization to obtain a valuation multiple. An average of these multiples is then applied to derive the company's value. If several metric multiples are used, professionals will often weigh each metric based on the relative importance of the metric in the valuation of the company.

Because the comparable public companies will have different characteristics than the firm undergoing the valuation, premiums or discounts may be applied to the target company. These valuation premiums or discounts are based on generally accepted research and empirical data and involve such adjustments as discounts for lack of marketability or control premiums. Unlike public companies, privately held firms do not have an actively traded market for their shares. This significant factor, referred to as liquidity or marketability, will

result in private companies almost always being valued at a discount to their public company peers.

### **Discounted Cash Flow**

As a methodology, discounted cash flow is often considered the preferred tool to value businesses. What sets this approach apart from the other approaches is that it is based on projected, future operating results rather than on historical operating results.

As a result, companies can be valued based on their future cash flows, which may be somewhat different from historical results, especially if a potential buyer expects to operate some aspects of the business differently.

Discounted cash flow analysis consists of projecting future cash flows, deriving a discount rate and applying this discount rate to the future cash flows and terminal value. This detailed analysis depends on accurate financial projections and discount rate assumptions. The resulting company valuation is the sum of discounted future cash flows and the discounted terminal value.

**Projecting Future Cash Flows** - The first step in conducting a discounted cash flow analysis is to project future operating cash flows over a projected holding period, generally five years. These projections are generally done before debt (but after taxes) to obtain an accurate indication of future free cash flow, without making any assumptions about the company's leverage. The future free cash flow is the cash left over after operating the business and investing in necessary property, plant and equipment, but before servicing debt or paying out any cash to owners.

**Discount Rate** - The second step in the discounted cash flow analysis is to develop a discount rate. The discount rate is also referred to as the weighted average cost of capital (WACC) and is best thought of as a percentage which represents the return expected by an owner of the company commensurate with the risk associated with the investment. For example, a risky Internet start-up with little in the way of a demonstrated track record, would receive a higher discount rate than a company with a long history of growth and profitability and more obvious future prospects. Discount rates are generally calculated by deriving the company's cost of equity capital and the company's after-tax cost of debt (note that although the cash flows are projected on a debt free basis, it is important to derive a WACC based in part on the company's expected cost of debt, since this reflects the company's level of risk). These financing costs are weighted and result in a WACC percentage, or discount rate. The cost of equity capital is generally determined using the capital asset pricing model (CAPM), which is based on three inputs: (1) the risk free rate (the expected return on long term government bonds - currently about 6%), (2) the beta, which is a measure of the relative riskiness of the company (compared to the market), and (3) the equity risk premium (the expected rate of return on common stocks in the long run - currently about 8%). The derived discount rate is applied to the projected future cash flows to determine the present value of the future cash flows.

**Terminal Value** - The next major step involves calculating a terminal, or residual value. A terminal value calculation combines assumptions used to derive future projections and the discount rate to obtain a current value for a company's long term future cash flows. The assumption underlying this step is that a company is a going concern and that its value is imbedded in its ability to generate value not just today, but well into the future. A terminal value is calculated by determining the cash flow in the period beyond the last projected period. This predicted future cash flow is then capitalized by a percentage (represented by the company's discount rate less the predicted long term growth rate) and this capitalized figure is then discounted back to the present using the discount rate.

### **Comprehensive Business Valuation**

Together with an analysis of the company's operating history, business, industry and competitive environment, the results from one or more of these valuation methodologies are combined to form the basis of a comprehensive business valuation. To be accurate, this comprehensive business valuation should take into account all aspects of the company's business, including factors which may be difficult to value and that do not show up on financial statements. These factors include, among other things, such value enhancers as proprietary technology, strong market position, an extensive sales network and an experienced management, that in the case of a sale is willing to remain with the company.

### **Summary**

There are four broad and generally accepted valuation methodologies. They are: (1) asset-based valuation, (2) comparable transactions analysis, (3) comparable public company method and (4) discounted cash flow analysis. Valuation experts will value a company with more than one of the methodologies, comparing results among the different approaches to determine a correct valuation, all the time keeping in mind the strengths and weaknesses inherent in each approach.

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